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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,865	06/06/2002	Thomas Franz	449122021000	2451
25227	7590	10/23/2003	EXAMINER	
MORRISON & FOERSTER LLP 1650 TYSONS BOULEVARD SUITE 300 MCLEAN, VA 22102			LAIR, DONALD M	
			ART UNIT	PAPER NUMBER
			2858	

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,865

Applicant(s)

FRANZ ET AL.

Examiner

Donald M. Lair

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Tazawa (US-4,989,150).

3. In regards to Claim 1, Tazawa discloses a method for determining the offset error of a measurement, where the measurement is subject to such an offset error of a coil current of an electromagnetic actuator, comprising:

measuring the coil current through a corresponding coil when the actuator is in a final position in which the coil is not supplied with current during the operation of the actuator (Column 3, lines 20 – 25 and 44 – 49); and

providing the value obtained as the offset error (Column 5, lines 44 – 50).

4. In regards to Claim 2, Tazawa discloses a method comprising the steps described above, wherein the coil current is measured by potential tapping before and after a resistor connected in series with the coil, wherein

the potential taps are being fed to a differential amplifier, and a constant value is added to a value output by the differential amplifier (Fig. 4A, element 43c).

5. In regards to Claim 3, Tazawa discloses a method comprising the steps described above, wherein the actuator has two coils respectively assigned to the final position, and

the coil current through the coil not assigned to the present final position is measured to determine the offset error (Figs. 6A – 6C).

6. In regards to Claim 4, Tazawa discloses a method comprising the steps described above, further comprising:

supplying the coil assigned to the final position with a capture current and a holding current such that the actuator is transferred into the final position (Column 5, line 51 – Column 6, lines 7).

7. In regards to Claim 5, Tazawa discloses a circuit for determining the offset error of a measurement, the measurement subject to an offset error of a coil current I of an electromagnetic actuator, the circuit comprising:

at least one coil with a resistor connected in series into a supply line of the coil (Fig. 4A);
a differential amplifier to which the potential on both sides of the resistor is fed (Fig. 4A, element 43c); and

a control circuit which evaluates the output of the differential amplifier when the coil is not carrying any current during the operation of the actuator, and the value obtained is output as the offset error I_o (Column 5, line 44 – Column 6, lines 7).

8. In regards to Claim 6, Tazawa discloses a circuit comprising the elements described above, wherein the output of the differential amplifier is fed together with the output of a constant-voltage source to an adding element such that an offset error of a specific polarity is obtained (Fig. 3, element 24).

9. In regards to Claim 7, Tazawa discloses a circuit comprising the elements described above, wherein the actuator has first and second coils assigned to a final position, and

a resistor is connected in the supply line to each coil, the differential amplifier taps the voltage dropping across the resistor, and the control circuit evaluates outputs of the differential amplifiers (Fig. 3, elements 12).

10. In regards to Claim 8, Tazawa discloses a circuit comprising the elements described above, wherein the control circuit for supplying current to the first and second coils transfers the actuator into a final position (Column 5, lines 44 – 61), and

the first coil assigned to the final position carries a capture current and a holding current, and the control circuit evaluates the output of the differential amplifier of the second coil (Figs. 3, 4A and 6C).

11. In regards to Claim 9, Tazazwa discloses a circuit comprising the elements described above, wherein the offset error I_o is determined an low-pass-filtered multiple times (Fig. 3, elements 12 and 12a).

Remarks

12. The foreign references cited in the IDS were not considered because no translation was provided.


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald M. Lair whose telephone number is (703) 305-4450. The examiner can normally be reached on Monday - Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (703) 308-0750. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1436.


Donald M. Lair
Patent Examiner
Art Unit 2858
October 16, 2003


N. Le
Supervisory Patent Examiner
Technology Center 2800